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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,483	09/12/2003	Koji Mishima	2003_1305	6334
513	7590	11/17/2005	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P.			LEADER, WILLIAM T	
2033 K STREET N. W.			ART UNIT	
SUITE 800			PAPER NUMBER	
WASHINGTON, DC 20006-1021			1742	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b>	Application No.	Applicant(s)	
	10/660,483	MISHIMA ET AL.	
	Examiner	Art Unit	
	William T. Leader	1742	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 20 October 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: none.
- Claim(s) objected to: none.
- Claim(s) rejected: 1-14.
- Claim(s) withdrawn from consideration: none.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_
13. ☐ Other: \_\_\_\_\_.

Continuation of 11: The final rejection is deemed to be proper for the reasons set forth in the final rejection and the following comments. With respect to claim 1, applicant argues that the references would not motivate one to modify the Dubin reference so as to bring a substrate into contact with a processing liquid after etching a plated metal film in combination with the step of plating a substrate having an etched metal film. The Dubin patent teaches several different embodiments, one of which includes a first plating step, an etching step and a second plating step. Reid discloses a step of pretreatment before plating (column 1, lines 11-15), but does not provide details of the pretreatment step. Landau provides details of a pretreatment step prior to plating in which a wafer is pretreated with ultra pure water to ensure complete wetting, and notes that surfactants improve wetting. Thus, in combination with Reid, Landau suggests a pretreatment with water containing a surfactant prior to plating. The suggestion to pretreat a substrate prior to plating is considered to apply to both the first and second plating steps of Dubin. Thus, by pretreating in this manner before the second plating step of Dubin, the wafer would be brought into contact with a processing liquid offering surface activity after an etching step as recited by applicant. Alternately, the processing liquid offering surface activity recited in instant claim 1 may be considered to be the plating solution itself. Applicant's specification states that the substrate is brought into contact with the processing solution before the substrate is plated and/or while the substrate is being plated (page 3, lines 12-13). The only way in which the substrate can be in contact with the processing solution while it is being plated is for the plating solution itself to be the processing solution. Instant claim 1 makes no distinction between the composition of the plating and processing solution, thus allowing the plating and processing solutions to be the same. By performing the second plating step in the plating solution after the etching step, Dubin meets the limitations of claim 1 since the wafer necessarily is in contact with the plating solution. It is noted that the plating solution of Dubin contains brighteners and levelers, commonly organic and sulfur compounds, as additives (column 6, lines 32-34 and lines 59-62). As noted at page 5, lines 4-5 of the specification, the organic substance or the sulfur compound in the plating solution is effective to increase wettability. Consequently, the processing solution of instant claim 1 reads on the plating solution of Dubin. With respect to claim 7 applicant argues that the plating process of Reid is performed before the rinsing solution is applied. This argument is not convincing. As previously indicated, Reid et al teach that in conventional plating, the wafer is processed serially through three separate stages: pre-treatment, plating and rinsing (column 1, lines 11-15). Thus, Reid et al clearly teach a pre-treatment step which is carried out before plating. Applicant does not mention Landau in the argument, but as indicated in the rejection and as discussed above, Landau provides details of a pretreatment step prior to plating, showing that application of a processing solution offering surface activity prior to plating is known. Reid teaches that it is undesirable for excess water to enter the plating solution, thereby providing motivation for removing pretreatment solution from the wafer before bringing the wafer into contact with the plating solution..

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